

 <p style="text-align: center;"><b>STATE OF ALASKA</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>AND PUBLIC FACILITIES</b></p> <p style="text-align: center;"><b>Policy and Procedure</b></p>	POLICY AND PROCEDURE NUMBER <b>02.01.110</b>	PAGE  1 of 5
	EFFECTIVE DATE  January 29, 2014	
SUBJECT  <b>Vehicle/Equipment Idle Reduction</b>		SUPERSEDES  <b>New</b>
CHAPTER  <b>Administration</b>	SECTION  <b>General Administration</b>	APPROVED BY  <b>Signature on File</b>

## PURPOSE

This formalizes the policy and procedure (P&P) of the department on establishing guidelines for idle reduction on State Equipment Fleet (SEF) vehicles and equipment. The purpose of this policy is to eliminate the unnecessary idling of department vehicles and other rolling stock as part of an ongoing effort to conserve fuel, save money, reduce air pollution, and serve as a role model for environmental stewardship.

## POLICY

It is the policy of the department that all gasoline and diesel powered state or contractor supplied vehicles and equipment, regardless of size, will idle only as necessary to perform the duties of the employee's position and/or the essential functions of the equipment. A driver of a department vehicle or piece of heavy equipment must not allow or cause an engine to idle at any location for more than the times shown below or as recommended by the manufacturer to cool down a diesel engine:

- Temperature greater than 20°F – one minute
- Temperature less than 20°F – 10 minutes

This policy applies to all department and contractor provided vehicles and equipment. Vehicles and equipment equipped with idle shutdown timers will have those timers activated and set at the 10 minute maximum.

### Exemptions to the above idle times:

- Stopped for an official traffic control device or when the vehicle must remain motionless due to traffic conditions over which the driver has no control including emergency situations
- Mechanical difficulties

- When necessary for auxiliary equipment installed on vehicles (research should be done to find a solution to running the equipment without idling)
- Emergency vehicles/situations (Example: Emergency vehicles and equipment while engaged in operational activities, responding to emergency situations, or performing an activity directly related to a public safety function)
- When verifying and ensuring the vehicle's safe operating condition
- When conducting testing, servicing, repairing, maintaining, or diagnostic operations on the vehicle
- Airport ground support equipment
- Heating/air conditioning for transport equipment (buses)
- When necessary to operate defrosting and heating equipment to ensure the health or safety of its occupants, but not solely for the comfort of the driver or passenger

## **PROCEDURE**

- No driver or operator shall permit, cause, or allow the engine of a department gasoline and/or diesel powered state or contractor supplied vehicle, or piece of heavy equipment to idle prior to, or at the conclusion of, any trip or route for any period of time beyond that which is reasonably required for normal operating conditions.
  - The engine may be idled for the purpose of start-up for a period of up to one minute when the ambient temperature is **more than 20°F**, and/or until the air pressure on the vehicle has reached the proper operating PSI (pounds per square inch) and all windows are properly and safely defrosted.
  - The engine may be idled for the purpose of start-up for a period of up to 10 consecutive minutes when the ambient temperature is **less than 20°F**, and/or until the air pressure on the vehicle has reached the proper operating PSI and all windows are properly and safely defrosted.
  - The driver or operator of a vehicle or an off road piece of equipment must turn off the engine when arriving at a destination and must not cause or allow an engine to idle at any location for more than 30 seconds for a gasoline engine or three to five minutes, as recommended by the manufacturer to cool down, for a diesel engine.

- Always follow the manufacturer's guidelines, as published in the operators manual and recommendations, for idling unless otherwise advised by the State Equipment Fleet.
- All operators should familiarize themselves with the maximum idle time specified in the equipment manufacturer guides.
- No operator shall permit, cause or allow the engine of a heavy-duty diesel powered motor vehicle to be accelerated while idling at any time in order to override the idle shutdown.
- Supervisors are required to educate, train, and implement procedures for 100% compliance with this policy.
- The State Equipment Fleet shall be tasked with monitoring and reporting the results to the commissioner on an annual basis.
- All auto-starts on light duty equipment should be programmed for 10 minutes.
- Vehicles and equipment equipped with idle shutdown timers will have those timers activated and set at the 10 minute maximum.
- Efforts to reduce idling in work zones can also contribute to substantial reduction in overall fuel consumption. The demands of radio monitoring and strobe light operation are generally modest and often overestimated. That equipment should be operated on battery power to the extent practical. Good judgment should be employed to balance the need to provide power to this equipment while limiting idling to a minimum. By working with your State Equipment Fleet District Manager, it may be possible to modify equipment to extend the time equipment can operate without idling. Low energy consumption associated with the use of strobes and LEDs contribute to making this cost-effective.

#### ADDITIONAL INFORMATION:

Nationwide, heavy-duty diesel vehicles consume over one billion gallons of fuel per year idling. In the Department of Transportation and Public Facilities (DOT&PF), a review of dump truck usage has shown an average of 30% idle time statewide, even in areas considered warmer compared to the interior region. For each hour spent idling, a typical truck of this size burns approximately one gallon of diesel fuel. A light-duty vehicle with less than eight cylinders wastes about half a cup of gasoline; the larger the engine, the more fuel is wasted.

Excessive idling of vehicles and equipment is not cost-effective, contributes to poor air quality and is harmful to the engines. An idle vehicle gets zero miles to the gallon and

with modern engines, allowing a vehicle to idle for more than 10 seconds wastes more fuel than simply turning it off and then restarting it. It is our responsibility to operate equipment in an economically and environmentally sound manner. New equipment with Tier III and IV engines are sensitive to excess idle time and may result in damage to the engine air regeneration systems or filters. This includes motor graders and loaders where a new filter will cost as much as \$8,000 to replace.

The department estimates that the Class 217 8CY trucks idle on average over 70,000 hours per year. At one gallon per hour or more consumption while idling, this represents a significant amount of money wasted. A reduction of just 30% in idle time represents a significant cost savings to the department. These savings do not include the reduced maintenance savings as trucks would receive less frequent scheduled preventative maintenance services. Estimating that savings at \$3,000 per year, per truck, increases the overall amount saved to nearly \$1 million per year for a single class of vehicle.

### **Idling Facts**

- Idling uses up to a gallon of fuel per hour, varying depending on the type and size of engine.
- Unnecessary idling contributes to environmental problems such as poor air quality.
- Idling time of about three to five minutes is all that is required to properly cool an engine after being under heavy load.
- Idling causes greater engine wear and tear over time. According to the American Trucking Association, such wear can increase maintenance costs by almost \$2,000 per year and shorten the life of the engine.
- Idling in Tier III or IV diesel engines reduces the proper function of the emission control system and can cause filters to become plugged resulting in an expensive repair. Idling for more than 10 seconds uses more fuel than restarting your engine.
- Idling causes spark plugs to become dirtier more quickly. This can cause an increase in fuel consumption by four to five percent.
- Excessive idling lets water condense in the vehicle's exhaust system, which can lead to corrosion.

### **Idle Myths**

*Myth:* The engine should be warmed up before driving.

*Reality:* The best way to warm up a vehicle is to drive it gently. Even in cold weather, a vehicle needs no more than 30 seconds (or just long enough to defog the windshield) of idling before driving.

*Myth:* Idling is good for the engine.

*Reality:* An idling gas or diesel engine will leave soot deposits that can build up and cause oil contamination. This can damage engine components, including cylinders, spark plugs and exhaust systems.

*Myth:* Shutting off and restarting a vehicle is hard on the engine and uses more fuel than a vehicle left running.

*Reality:* Any time an engine is idling, money and fuel are being wasted. Frequent restarting has minimal impact on engine components like the battery and the starter motor. Component wear due to frequent restarting of the engine is estimated to add a minuscule \$10 per year to the cost of driving.

*Myth:* Remote control engine starters are great for warming the engine in winter.

*Reality:* Remote starters waste fuel. Plugging in an electric engine block heater on a timer saves fuel and does not wear the engine. If using a remote starter, then turn it on only when ready to step outside and enter the vehicle.

## **AUTHORITY**

AS 44.17.030

## **IMPLEMENTATION RESPONSIBILITY**

Commissioner, deputy commissioners, division/regional directors, and system directors/managers

## **DISTRIBUTION**

All department employees via the DOT&PF website